OUR SMALL EASTERN SHRIKES.

BY WILLIAM PALMER.

THREE Shrikes are universally understood to occur in North America east of the Plains. The Northern Shrike (*Lanius borealis*), a winter visitant in our eastern States; the Loggerhead (*L. ludovicianus*), which is considered a fairly common bird over most of the region between Maine and Florida and Ohio and Illinois to Louisiana; and the White-rumped (*L. l. excubitoroides*), which is supposed to inhabit Canada, Michigan, and westwards.

An examination of considerable material, 176 specimens, compels me to relegate *excubitoroides* to the Plains region west of the immediate Mississippi wooded drainage area; *ludovicianus* to the South Atlantic and Gulf coasts, and Florida, and to recognize a new form as occupying much of the remaining region of the East.

Historical Synopsis.

The name *Lanius ludovicianus* was first given by Brisson[1] to a bird from the region then known as Louisiana. On his description Linnæus[2] based his binomial name composed of the same words.

Vieillot[3] describes two Shrikes, one *Lanius borealis*, the other *L. ardosiaceus*, whose habitat he gives as Georgia, Florida, and Louisiana.

Wilson knew but two Shrikes, one the northern, which he called *L. excubitor*, thinking it identical with the European bird, and his *Lanius carolinensis*[4] which he found on his visit to South Carolina and Georgia. Of this he says: "This species inhabits the rice plantations of Carolina and Georgia, where it is protected for its usefulness in destroying mice." We may be sure that Wilson

[1] Orn., II, 1760, 162, pl. 15, fig. 2.

[2] S. N., I, 1766, 134.

[3] Ois. Am. Sept., I, 1807, 81.

[4] Am. Orn., III, 1811, 57, pl. 22, fig. 5.

either knew nothing of a small Shrike occurring north of the Carolinas or that he confused it with the Northern.

Bonaparte seems to have had no special acquaintance with the Loggerhead. In his 'Observations on the Nomenclature of Wilson's Ornithology,' he states,[1] "34. § *L. carolinensis*, vol. iii., p. 57. This species is peculiar to the southern parts of North America. Vieillot's name of *ardosiaceus* has the priority, and will, therefore, be adopted." He then gives "L. ludovicianus? Linn" as a synonym of "L. ardosiaceus Vieill." In later publications he adopts *Lanius ludovicianus* as the correct name for the Loggerhead.

Swainson evidently knew nothing by practical experience of the Loggerhead Shrike. Apparently he had no specimens, but used the descriptions of his predecessors in distinguishing his *Lanius excubitoroides* from *L. ludovicianus*.[2]

Audubon's knowledge of these birds was superior to all others but he fell far short of the real facts. He tells us, "The Loggerhead Shrike is partially migratory in Carolina. A few may be found through the winter; but the number is ten times greater in summer."[3] He also quotes Wilson as above. Audubon appears never to have suspected that his bird bred in Louisiana, for he says, "Seldom reaching farther eastward than North Carolina, or farther inland than the State of Mississippi, in which latter, as well as in Louisiana, it appears only during the winter months. Its chief residence may, therefore, be looked upon as the Floridas, Georgia, and the Carolinas."[4] He also says: "This bird appears in Louisiana only at intervals, and seldom remains more than a few weeks in December or January."[5] The original of Audubon's plate was procured by him in Louisiana.

Professor Baird gave the range of the Loggerhead as "South Atlantic and Gulf States," and of *Lanius excubitoroides* as "Missouri plains and fur countries to Pacific coast. Eastward into Wisconsin, Illinois, and Michigan (?)."[6] This is the first

[1] Journ. Acad. Nat. Sci. Phila., III, V.

[2] Fauna Boreali Americana, II, 1831, 115, pl. 34.

[3] Birds of America, Vol. IV, 1842, p. 137.

[4] *l. c.*, p. 135.

[5] *l. c.*, 136.

[6] B. N. A., 1358, 325, 326.

appearance of this last name for a bird east of the Mississippi River, a practice only too readily followed afterwards, for its use extended to Maine and Canada and even to the Carolinas. Professor Baird had five specimens of *ludovicianus* from Georgia and an imperfect series from Wisconsin, Illinois and Michigan, besides a number from the West, and necessarily considered his southern specimens as distinct from the others.

Dr. Coues, with all the work of his predecessors before him, and his South Carolina and western experiences, readily fell into the view of considering the Upper Mississippi birds as intermediate between *L. ludovicianus* and *L. excubitoroides*, a conclusion which has since remained unchanged.[1] His work had the effect of broadening the ornithological fieldwork of numerous observers who based their identifications primarily upon his results. Some peculiar Shrike literature was thus encouraged, the effects of which will be noted later.

The only Shrikes mentioned by Dr. Gadow[2] that are probably from the eastern States are two, a "juv. sk." from Louisiana, and an "ad. sk." from "N. America," which may be anything. All the others mentioned are from Mexico and Western America, yet all are placed under one name *L. ludovicianus*, though it is stated that Canadian examples "are very distinct from the extreme southern form, which is confined to the southern States and Mexico (*L. ludovicianus*)."

We now come to a phase of literature due to our increasing knowledge of the range of these birds, for, as the taste for ornithology increased through the middle and northeastern States, so accounts of these birds became numerous. At first they were ascribed to the larger species *L. borealis*, for we find records of this bird breeding in the New England States and Pennsylvania, which were afterwards changed to *ludovicianus* or *excubitoroides*. Then notices of the capture of *L. excubitoroides* became common, though in many cases a wrong identification was later admitted and change made to *ludovicianus*. But the records increased,

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[1] Key to N. A. Birds, 1872, 125; 1890, 338; B. N. W., 1874, 103; B. C. V., 1878, 563.

[2] Cat. Birds Brit. Mus., Vol. VIII, 1883, 246.

both names being variously used, even in one case, both of them, for the birds of a mated pair! until now it is considered that except in Michigan, Wisconsin, Minnesota and Canada, *ludovicianus* is the only form found.

Dr. Wheaton[1] gives *Lanius ludovicianus* as, a "Common summer resident in Middle, less common in Northern and Southern Ohio..... First ascertained to occur in Ohio by myself in 1874, a female specimen, taken May 31, 1873, on which my note in Coues' Birds of the Northwest was in part based, proving a nearly typical specimen of this variety. Her mate was an equally well marked individual of var. *excubitoroides*." On page 311, he says of this latter, "Rare in southern and middle Ohio, probably more common in northern Ohio. Summer resident from March to September. Breeds." On page 312 he says of *excubitoroides*: "Thus it appears that this variety has extended its range eastward from the Mississippi Valley mainly along the basin of the Great Lakes."

Raymond W. Smith,[3] speaking of the birds of Warren County, Ohio, gives *L. ludovicianus* as "uncommon summer resident," and of *L. l. excubitoroides* as "resident, probably breeds." He also says: "The Shrikes of this locality are just on the border line between the Loggerhead and the White-rumps, and in many cases it is almost impossible to distinguish the variety."

The A. O. U. Check-List of 1886 gave the range of *ludovicianus* as "Florida, the Carolinas, and the Gulf States east of Texas." In the list of 1895 this became "Eastern United States, west to the Plains; north to northern New England. Breeds from the Gulf States to Virginia and casually north, on the Atlantic Coast to southern New Jersey; in the interior, northward to the Great Lakes, and through western Pennsylvania and New York to New Hampshire, Vermont, and Maine."

It would seem that, generally, the test of whether a particular bird belonged to either *ludovicianus* or *excubitoroides*, depended on the presence of dark, or white (= pale) upper tail-coverts, the

[1] Birds of Ohio, 1880, 309.

[2] p. 233.

[3] Journ. Am. Soc. N. Hist., 1891, 122.

universal ignorance of the real *excubitoroides* being sufficient to determine the issue. Also, identifications of *excubitoroides* from east of the Plains have been based on breeding birds, usually, sometimes on winter specimens taken at the most northern part of their winter habitat. In no instance do these seem to have been compared with typical specimens of the form whose name they took.

Taxonomic Differences.

Lanius ludovicianus ludovicianus *Linn.*

LOGGERHEAD SHRIKE.

Subspecific characters. — Adult ♂: Above dark slaty; beneath almost immaculate white; bill large and stout, swollen toward tip; hook large and coarse, gently curved downwards; tail longer than wing.

Adult ♀: Similar, but smaller. Type locality, "Louisiana."

Lanius ludovicianus migrans, *subsp. nov.*

MIGRANT SHRIKE.

Subspecific characters. — Adult ♂: Above bluish gray; beneath pale slaty; throat white; bill smaller, regularly tapering; hook delicate and sharply bent downwards; tail shorter than wing. Type, No. 163077, ♂, Kingston, Ontario, April 4, 1898; Dr. C. K. Clarke.

Adult ♀: Duller, especially beneath, and smaller.

Distribution.

From middle Louisiana eastward along the Gulf Coast and its indentations; throughout Florida, and eastward into North Carolina. Extending from this range to an indeterminate distance up the valleys, though generally confined below the 100-foot contour line.[1] Non-migratory except at its more northern and its higher habitat . . . . *ludovicianus.*

[1] It would seem desirable that the life distribution of forms should be considered in relation to contour lines, altitude and the influences of the various kinds of forest distribution being the principal factors affecting them. The relative quiescent humidity of swamps and dense forests with their very slight interactions resulting from rapid general climate changes, plus the minimum amount of sunlight, produces results different from the dryer and more exposed elevations or depressions. The amount of sunlight, the character of the food, and the influences of a limited habitat seem more important in their results than degrees of temperature. Increase or decrease of the radiating powers of the ground surface destroys or drives out forms and necessarily influence those that remain, or replace them, and this radiating power is determined by influences other than mere temperature.

From Maine, Vermont, and Canada to Minnesota; southwards into North Carolina and the Ohio Valley to the Plains. Absent in winter from its more northern and higher habitats and migrating in the autumn toward the Atlantic Coast and into the Carolinas, Tennessee, and lower Mississippi valley. Breeding almost entirely above the 500-foot contour in the valleys, casually up to about 2000 feet, and to within about 50 miles of the coast in Maine. From Canada and the edges of the plains intergrading into *excubitoroides* . . . . . *migrans.*

From the above it will be seen that *ludovicianus* is a resident of the seaward edge of the coastal plain, ranging up the valleys above the 100-foot contour in suitable places, especially where civilization has prepared a way. On the other hand, *migrans* is a resident of the Transition Zone between the Carolinian and the Canadian, affected in some places by the opening up of suitable breeding places by the agency of man.

In Maine the Migrant Shrike does not seem to be uncommon. Mr. O. W. Knight has recently recorded it from numerous localities[1] and informs me that he can always find them in summer. He is sure of its breeding at Hampden, five miles south of Bangor and about 55 miles from the sea. Most of the records I have are breeding records, but the bird does not seem to winter. In New Hampshire and Vermont the bird is locally distributed in suitable places, nearly all of the ten localities I have being of breeding birds. Except one breeding record in northwestern Massachusetts[2] the records from that State and from Connecticut, Rhode Island and New Jersey are either of winter visitants or of migrants, though Mr. Stone mentions its probable breeding in southern New Jersey,[3] but this may be the southern form. In New York it breeds in most of the middle and western counties, being a migrant or winter resident in the Hudson Valley and on Long Island. In Pennsylvania it breeds in the counties bordering the western boundary, but it is only a migrant or winter visitant in the rest of the State, apparently. I do not know of its breeding in Maryland, though Mr. Kirkwood informs me that in the manu-

[1] Bull. Univ. Maine, 1897.

[2] Auk, 1887, 180; Am. Nat. 1887, 90.

[3] Birds E. Penn. and N. J., 1894, 125.

scripts left by the late E. A. Small there is a note of its occurrence in Washington County in summer. In Virginia it is a winter visitor and migrant over the whole tidewater region to the foothills of the Blue Ridge. In the valley of Virginia it is a summer resident, wintering in mild winters in the southern portion. It breeds commonly in Nelson County (W. R. Robinson[1]); in Warren County (G. S. Miller, Jr.[2]); in Rappahanock County (Prof. F. E. L. Beal[2]), and in Fanquier County (R. Ridgway[3]). In North Carolina it is confined in summer to the western portion along the foothills. It is entirely absent in summer at Raleigh, though a winter visitor there (Brimley Bros.[4]), but is a common breeder further west at Statesville (R. B. McLaughlin[4]). It doubtless occurs further south, both as a breeder and winter resident, but I have no sure instances. From Montreal (Wintle[4]) to Ottawa (Prof. Macoun[2]), County Perth (Kells), and Kingston, Ontario (Dr. C. K. Clark[4]), it occurs through most of Michigan and Wisconsin to Minneapolis, thence to the Ohio River, almost every record being a breeding one. It has been recorded only as a migrant from Kentucky (Fulton, Warren, and Nelson Counties). I have seen three specimens from Tennessee (Roane County and Nashville), all winter birds. West of the Mississippi it undoubtedly occurs in suitable places to the edge of the Plains, but records are very few and uncertain.

The Loggerhead is abundant throughout Florida and along the Atlantic Coast into North Carolina, and probably into Virginia on the shores of the Chesapeake region. Robinson's record for Chesterfield County[5] may include this bird for the summer resident. It occurs along the coasts of Western Florida and of Alabama, extending up the valleys of the latter State for a considerable distance, probably above the 100-foot contour, Wilcox County (Rev. H. E. Wheeler[6]); Shelby County (C. F. Witherby[6]); and Butler and Antanga Counties (Dr. D. L. Wilkinson[6]). I have

[1] In letter and specimen.

[2] In person,

[3] In person, and Smith, Pastime, Oct., 1884, 27.

[4] In letters.

[5] Auk, 1889, 195.

[6] In letters.

seen several specimens from Hale County, including young. Dr. Wilkinson took a set of eggs, March 29, 1888, in Gastonbury, Wilcox County, a set of three, and another of four eggs in Hale County, March 30, 1889.[1] In Mississippi and Louisiana it is common along the coast and probably over the greater parts of these States in suitable places along the watercourses, and for some distance up the Mississippi Valley. The Oxford record[2] is almost certainly this bird. It is replaced by another form in Texas.

General Differences.

In *migrans* the wing is longer than the tail, due to its migratory habit; in *ludovicianus* the tail is longest, thus indicating its fixed habitat. In consequence the third primary feather of the former is usually the longest, or is equal to the fourth; in the latter the fourth is nearly always the longest. The forehead of *ludovicianus* is dark like the top of head, in *migrans* it is nearly always paler. In the southern bird the underparts are usually almost immaculate, in the other the slaty of the sides of the breast extends across, especially in the breeding plumage. Usually a faint trace of reddish is perceptible on the breast of *ludovicianus*, but is stronger in *migrans*, especially in the females and immature. Signs of immaturity disappear quickly in *ludovicianus*, they soon assume adult plumage; the reverse is true of *migrans*, the duller plumage, browner primaries, and paler edgings on the wing-coverts lasting longer. Larger areas of white marking occur on individuals of both forms and are indicative of greater age but some immature are precocious.

From *L. l. excubitoroides*,[3] *migrans* is distinguishable by its darker, duller plumage, especially beneath, by being stouter and longer, and by its larger bill, tarsi and feet.

In *ludovicianus* the upper tail-coverts are almost invariably similar to the back in color, paleness when occurring being due to

[1] In letters.

[2] Ragsdale, Auk, 1889, 224.

[3] To be treated in another paper.

bleaching and wearing. In *migrans* the male usually has pale upper tail-coverts, bleaching in the breeding season to a dull, dirty whitish. The stronger, duller colors of the females rarely bleaching as much. At the end of the breeding season the plumage usually presents a very ragged, bleached condition with all the colors very much faded. The great difference, usually, between the purer colors of the males and the darker, duller colors of the females, the difference in size and the consequent varying amount of bleaching of the sexes is responsible for the identification, so common, of *excubitoroides* as an eastern bird. The plumage is always paler when fresh but soon darkens, especially in *migrans*, where the contrast is greater. In this also the contrast between the white throat and the darkish breast is nearly always evident, and exceedingly rare in the southern bird.

Intermediates and Variations.

Specimens from Greensboro, Alabama, in the Tombigbee River Valley, are referable to *ludovicianus*, but represent a tendency toward *migrans*, the bill being slenderer and more hooked. A specimen from Chester, South Carolina, is similar, as are also two in Mr. Kohn's collection from Covington, Louisiana. These last are evidently migrants from a more northern locality, as breeding birds from the same region in Mr. Kohn's collection are typical *ludovicianus*. In Dr. A. K. Fisher's collection are six specimens from St. Helena Island, near Beaufort, South Carolina. These also represent a variation in the direction of *migrans*. Though having the large bill, the hook is more curved and longer.

Certain specimens of *migrans* from Southern Illinois have stouter bills than usual, as have also the birds breeding about Minneapolis, Minnesota. These evidently represent groups of individuals with restricted habitats in the valleys of large rivers. Their having the fourth quill longer than the third, or equal to it, would indicate that their migratory range is not extensive.

Measurements.

Measurements were made of nearly all the specimens grouped by States. These show that the birds taken at the most north-

ern parts of the range of *migrans* are the largest. The averages include all the specimens measured, no weeding out of the immature or smallest being done. The single measurements will show the usual range of size in fully adult birds.

Averages of *ludovicianus*.

Of 24 males, wings, 3.77; tails, 3.89; culmens, .60; tarsi, 1.07.

Of 13 females, wings, 3.69; tails, 3.79; culmens, .58; tarsi, 1.05.

Averages of *migrans*.

Of 35 males, wings, 3.88; tails, 3.78; culmens, .54; tarsi, 1.07.

Of 24 females, wings, 3.78; tails, 3.66; culmens, .53; tarsi, 1.08.

General Considerations.

Shrikes are inhabitants of open, wooded, scrubby country. The mixed prairie, savanna, open pine woods, and hummock lands of the southern coasts afford a congenial habitat for the Loggerhead, which is an abundant bird. Similar conditions but with a greatly different vegetation, prevail about the prairies of the middle States and the farms and open country of the summer habitat of the Migrant Shrike. From the distribution here given it will be noticed that there is a considerable hiatus[1] between the breeding ranges of these two forms. This is evidently caused by the fact that the interval between the 100-foot and the 500-foot contours is a part of the great coastal plain forest region of the south, a region unsuited to Shrikes, and in which they do not breed. It is possible that, as civilization reached the prairies of Indiana and Illinois, a passage eastward was afforded by which these birds extended their range eastward into Maine and south-

[1] See, Ragsdale, Auk, 1889, 224-226, though his facts were mixed, no hiatus really occurring between *migrans* and *excubitoroides*, but between the former and *ludovicianus*.

MEASUREMENTS OF ADULT *Lanius ludovicianus ludovicianus.*

No.	Locality.	Sex.	Date.	Collector.	Wing.	Tail.	Culmen.	Tarsus.	
	Covington, La.	♂	Nov. 13, 1895	G. Kohn	3.83	4.00	.58	1.09	Kohn Collection
150,002	Kissimmee R. Fla.	♂	Mar. 2, 1895	R. Ridgway	3.75	4.05	.61	1.05	U.S.N.M. "
3,825	" " "	♂	Feb. 28, 1895	W. Palmer	3.80	4.15	.67	1.10	Palmer "
137,854	Riceboro, Ga.	♂	Ap. 8, 1893	J. A. Loring	3.90	3.97	.60	1.12	Dept.Agri. "
137,853	Georgetown, S. C.	♂	Ap. 10, 1895	C. P. Brimley	3.75	3.89	.60	1.08	" " "
	Covington, La.	♀	Oct. 26, 1889	G. Kohn	3.66	3.90	.57	1.06	Kohn "
150,006	Lake Kissimmee, Fla.	♀	Feb. 26, 1895	R. Ridgway	3.67	3.88	.60	1.04	U.S.N.M. "
150,005	Kissimmee R. Fla.	♀	Mar. 3, 1895	" "	3.78	3.97	.60	1.04	" "
150,130	" " "	♀	Mar. 3, 1895	W. Palmer	3.70	3.87	.63	1.04	" "
3,050	Liberty Co., Ga.	♀	1846	W. L. Jones	3.77	3.90	.60	1.11	" "

MEASUREMENTS OF ADULT *Lanius ludovicianus migrans.*

No.	Locality.	Sex.	Date.	Collector.	Wing.	Tail.	Culmen.	Tarsus.	
1,810	Minneapolis, Minn.	♂	May 9, 1881	F. Benner	3.99	3.85	.54	1.09	Minn. State, Collection
163,077	Kingston, Ont.	♂	Ap. 4, 1898	C. K. Clarke	3.90	3.79	.54	1.08	U. S. N. M. "
2,544	Ballston, Va.	♂	Ap. 1, 1890	W. Palmer	3.90	3.73	.53	1.10	Palmer "
	Wingina, "	♂	May 2, 1898	W. R. Robinson	3.75	3.60	.57	1.10	" "
123,019	Syracuse, N. Y.	♂	Ap. 3, 1887	M. M. Green	3.98	3.90	.53	1.12	U. S. N. M. "
163,076	Falls Church, Va.	♂	Nov. 27, 1890	W. Palmer	3.87	3.78	.59	1.10	" "
163,078	Kingston, Ont.	♀	Ap. 6, 1898	C. K. Clarke	3.82	3.70	.52	1.10	" "
159,707	Middlebury, Vt.	♀	Ap. , 1897	A. D. Mead	3.80	3.78	.50	1.10	" "
103,853	Rockwood, Tenn.	♀	Mar. 18, 1885	W. H. Fox	3.84	3.74	.53	1.03	" "
123,018	College Park, Md.	♀	Nov. 27, 1890	C. W. Richmond	3.82	3.60	.50	1.06	" "
81,314	Brander, Va.	♀	Dec. 6, 1880	G. B. Harrison	3.80	3.76	.53	1.08	" "
83,212	Wabash Co., Ill.	♀	Ap. 17, 1878	R. Ridgway	3.88	3.77	.57	1.10	" "

ward into the Carolinas along the foothills of the mountains, the early highways of the pioneers. The many records of the abundance now and former rarity of Shrikes may be thus explained, but the facts are far too few and too recent to be of much value in determining such a question. Dr. Ralph informs me that Shrikes have penetrated into the Adirondack region by means of the roads leading to settlements located in the dense woods at an elevation of 2,600 feet.

The two birds are perfectly distinct and readily separable, but may meet in the lower Mississippi Valley, and in places where civilization has changed the former natural conditions, dense forests giving way to open country, old fields, bushes, etc.

The Molt of the Adult.

Adults begin to change in July or August, or later, according to summer habitat. Some begin to change before migrating, while in others it is delayed until they reach their winter habitat. An adult male that I took on Smith's Island, Virginia, in fall migration on August 30, 1895, evidently began to molt before it started, but the effects of the journey prevented its completion, though it permitted the new feathers to attain full growth. The four middle feathers of the tail are nearly full grown, while the outer four on each side are the old ones. In the wings the tertials are full grown and new, as are also the inner primaries, but the outer primaries and most of the secondaries are old. Very few growing feathers are to be seen. Another taken in Alexandria County, Virginia, October 3, 1889, is in full molt on the wings; the tertials and inner primaries and some of the secondaries are full grown and the others are of various lengths, the two outer old primaries being still in place. The tail-feathers are in various stages, the outer being the shortest, about an inch, while the central are full grown. The body plumage is nearly complete. Another taken in Maryland, November 1, is further advanced. Specimens taken in January, February, and April show some growing feathers on the throat, and this seems to be the extent of the spring change in the males. I have seen no molting females.

Molt of the Immature.

When the flight feathers of the young are full grown new body feathers begin to grow on the back and breast. Those of the back are dullish slaty, faintly barred subterminally with blackish. Beneath they are whitish, tinged with slaty on the sides and very slightly with brownish on the underbody except on the throat, each feather being subterminally crossed with a faint crescent of dusky. As the change continues much of this barring and the dull colors wear off, leaving the white and slaty purer. The last of the nestling plumage to disappear on the body is on the pileum, upper neck, and rump. The progress of the change of the flight feathers I have been unable to determine, specimens being too few. The nestling wing-coverts are retained for a long time and it is probable that, like the flight feathers, they do not change until the next summer's molt. An immature female taken November 11, in King George County, Virginia, has not changed its flight feathers, but many pinfeathers are concealed under the breast feathers and molting is evident on the throat. A series of ten specimens collected in the vicinity of Washington, D. C., by Mr. James Gaut, during the last week of March of this year, are all immature birds. Except two they are in various stages of molting change, both males and females, new feathers appearing on the throat and breast, on the face, and, in a few specimens, on the head and back. The wing-coverts still have the immature light patches at their tips though variously worn. No change in the flight feathers appears, and the primaries are usually considerably weathered.

SPECIMENS EXAMINED.

L. l. migrans.

Maine	1	Ohio	2
Vermont	2	Indiana	1
New York	12	Illinois	20
Pennsylvania	3	Wisconsin	1
Maryland	7	Minnesota	17
District of Columbia	9	Tennessee	3
Virginia	22	Canada	3
North Carolina	1		
	Total		104

L. ludovicianus.

South Carolina	11
Georgia	10
Florida	38
Alabama	3
Mississippi	2
Louisiana	8
Total	72
Total of both forms	176

I am under special obligations to many friends: To Mr. Ridgway for the use of the National Museum series; to Dr. T. S. Roberts, of Minneapolis, who sent me the entire Minnesota State collection; to Dr. A. K. Fisher for the use of many specimens; to Mr. Gustave Kohn, of New Orleans; Mr. Ora W. Knight, of Maine; Dr. C. K. Clarke, of Kingston, Ontario; Mr. W. R. Robinson, of Wingina, Virginia, and Mr. James Gaut, of Washington, D. C.

DESCRIPTIONS OF TWO NEW BIRDS FROM THE SANTA BARBARA ISLANDS, SOUTHERN CALIFORNA.

BY EDGAR A. MEARNS.

Carpodacus clementis, new species.

SAN CLEMENTE HOUSE FINCH.

Carpodacus frontalis TOWNSEND, Proc. U. S. Nat. Mus., XIII, No. 799, 1890, pp. 139 (Santa Barbara Island, California), 140 (San Clemente and Santa Rosa Islands, California).

Carpodacus mexicanus frontalis GRINNELL, Rep. on the Birds of Santa Barbara, San Nicolas and San Clemente Islands, Pub ication No. I of the Pasadena Academy of Sciences, August, 1897, pp. 6 (Santa Barbara Island, California), 10 (San Nicolas Island) 16 and 17 (San Clemente Island.)

Type from San Clemente Island, California, adult male, No. 134,784, U. S. National Museum. Collected by the author, August 25, 1894.